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10/790,981	03/01/2004	Sanjay Bhardwaj	04303/000N238-US0	2112

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EXAMINER

AHMED, ENAM

ART UNIT	PAPER NUMBER
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2112

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/790,981

Applicant(s)

BHARDWAJ, SANJAY

Examiner

Enam Ahmed

Art Unit

2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/1/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/12/07, 4/30/04</u> . | 6) <input type="checkbox"/> Other: _____ |

Non – Final Rejection

The disclosure is objected to because of the following informalities:

With respect to page 8 and line 8, the number 304 is not consistent with drawing 3.
There is no 303 mentioned in the drawing.

Appropriate correction is required.

Claim 20 is objected to because of the following informalities:

Claim 20 is claiming a device which depends on the method claim. For
examination purposes the device in claim 20 is replaced by a method.

Appropriate correction is required.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1 – 3, 8 – 9 and 20 are rejected under 35 U.S.C. 101 as being non-
statutory for failing to produce any real world tangible result.

35 U.S.C. 103 Rejection

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 9 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerns et al. (U.S. Patent No. 6,819,679) further in view of Wright et al. (U.S. Patent No. 7,103,049),

With respect to claim 1, the Kerns et al. reference teaches selecting a first position from a plurality of possible positions (column 4, lines 37 – 50); testing the first selected position (column 5, lines 61 – 66), (column 6, lines 19 – 23); if the first selected position is not correct, selecting a second position from a second plurality of possible positions (column 6, lines 24-31 and lines 338-42). The Kerns et al. reference does not teach wherein each of the second plurality of possible positions is comprised of each of the first plurality of possible positions shifted by one position unit. The Wright et al. reference teaches wherein each of the second plurality of possible positions is comprised of each of the first plurality of possible positions shifted by one position unit (column 2, lines 38-45). Thus it would have been obvious to have combined the references Kerns et al. and Wright et al. to have incorporated each of the second plurality of possible positions is comprised of each of the first plurality of possible positions shifted by one position unit. The motivation for each of the second plurality of possible positions is comprised of each of the first plurality of possible positions shifted

by one position unit is so the output signal is aligned with the boundary of a byte of the data stream.

With respect to claim 2, the Kerns et al. reference teaches testing the second selected position (column 6, lines 37-42); if the second selected position is not correct, selecting a third position from the first plurality of possible positions (column 6, lines 37-42), (see Fig.9, Locate next frame – 505);

With respect to claim 3, the Kerns et al. and Wright et al. references teach all of the limitations of claim 1. The kerns et al. reference does not teach rotating a segment of the serial stream of data so that the synchronization pattern is at a predetermined position. The Wright et al. reference teaches rotating a segment of the serial stream of data so that the synchronization pattern is at a predetermined position (column 5, lines 54 – column 6, line 2), (column 3, lines 42-52). Thus it would have been obvious to have combined the references Kerns et al. and Wright et al. to have incorporated rotating a segment of the serial stream of data so that the synchronization pattern is at a predetermined position. The motivation for rotating a segment of the serial stream of data so that the synchronization pattern is at a predetermined position is so the output signal is aligned with the boundary of a byte of the data stream.

With respect to claim 4, the Wright et al. reference teaches selecting a portion of the rotated segment (column 6, line 61 – column 7, line 5); selecting a portion of a previous rotated segment (column 2, lines 9-24), (column 2, lines 38-45); combining the

selected portions to form an output segment of the serial stream of data, wherein the output segment is no longer than the segment (column 2, lines 9-24).

With respect to claim 5, the Wright et al. reference teaches wherein the output segment of the serial stream of data comprises synchronization patterns at fixed positions (column 2, lines 9-24).

With respect to claim 6, the Wright et al. reference teaches incrementing a first counter if the output segment contains a synchronization pattern at a predetermined position (column 2, lines 9-24); incrementing a second counter if the output segment does not contain a synchronization pattern at the predetermined position (column 2, lines 46-56).

With respect to claim 7, the Wright et al. reference teaches determining a state of synchronization as a function of the first and second counters (column 2, lines 46-56), (column 3, lines 11-41).

With respect to claim 8, all of the limitations of claim 1 have been addressed above. The Kerns et al. reference teaches wherein the step of selecting includes determining a subset of the first plurality of possible positions as a function of a segment of the serial stream of data (column 4, lines 37-54), column 1, lines 46-65).

With respect to claim 9, the Kerns et al. reference teaches wherein the step of selecting includes determining a subset of the first plurality of possible positions as a function of a previous selection (column 6, lines 19-23).

With respect to claim 18, the Kerns et al. reference teaches wherein the serial stream of data comprises a plurality of frames, each frame comprising a data field and a synchronization pattern (see Fig. 5, Load frames N and N+1 – 202).

Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerns et al. (U.S. Patent No. 6,819,679), Wright et al. (U.S. Patent No. 7,103,049), Mo et al. (U.S. Patent No. 7,151,773) further in view of Taborek, Sr. et al. (U.S. 7,020,729).

With respect to claim 19, The Kerns et al. reference teaches synchronization pattern comprises two bits column 4, lines 19-53). The Kerns et al. reference does not teach wherein the data field comprises 64 bits. The Mo et al. reference teaches wherein the data field comprises 64 bits (column 9, lines 31-48).

With respect to claim 20, the references Kerns et al. and Wright et al. teach all of the limitations of claim 1 along with means to perform data transmission, But do not teach the step wherein the serial stream of data is 10 Gb Ethernet data. However the Taborek, Sr. et al. reference teaches that serialized data can be a 10 Gb Ethernet data (column 2, line 55 – column 3, line 16). Therefore it would have been obvious to one of ordinary skill in the art to have modified the references Wright et al. and Kerns et al. to

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include a 10Gb ethernet data from reference Taborek, Sr. et al into the claimed invention.

Claims 10,13-16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taborek, Sr. et al. (U.S. 7,020,729) further in view of Wright et al. (U.S. Patent No. 7,103,049)

With respect to claim 10, the Taborek, Sr. et al. reference teaches a serial to parallel converter for converting the serialized framed data to a parallel framed data (column 3, lines 17-25); a guesser for guessing a position of a frame boundary in the parallel framed data (column 5, line 61 – column 6, line 6); a tester for testing the data output to determine if the frame boundary is at a predetermined position in the data output (column 6, lines 6 – 21); counting mechanism for counting when the frame boundary is at the predetermined position in the data output (column 1, lines 13 – 31); a state machine, the state machine determining if the device is in a state of synchronization based on the counting mechanism (column 5, lines 25-33). The Taborek, Sr. et al. reference does not teach a rotator for rotating the parallel framed data in accordance with the position guessed by the guesser and a selector for selecting a portion of the rotated parallel framed data and a portion of the delayed version of the rotated parallel framed data to form a data output. The Wright et al. reference teaches a rotator for rotating the parallel framed data in accordance with the position guessed by the guesser (column 2, lines 57 – column 3, line 10), (column 3, lines 42-52); a selector for selecting a portion of the rotated parallel framed data and a portion of the delayed version of the rotated parallel framed data to form a data output (column 6, line 61 –

column 7, line 5), (column 5, lines 28-40) and 9column 6, lines 17-35). Thus it would have been obvious to combine the references Taborek et al. and Wright et al. to incorporate a rotator for rotating the parallel framed data in accordance with the position guessed by the guesser and a selector for selecting a portion of the rotated parallel framed data and a portion of the delayed version of the rotated parallel framed data to form a data output into the claimed invention. The motivation for a rotator for rotating the parallel framed data in accordance with the position guessed by the guesser and a selector for selecting a portion of the rotated parallel framed data and a portion of the delayed version of the rotated parallel framed data to form a data output is so that the synchronization pattern is at a predetermined position is so the output signal is aligned with the boundary of a byte of the data stream.

With respect to claim 13, all of the limitations of claim 10 have been addressed above. The Taborek, Sr. et al. reference does not teach a shifter for shifting the parallel framed data by an odd number of bits and a selector for selecting the parallel framed data or the parallel framed data shifted by the odd number of bits, wherein the selected data is provided to the rotator. The Wright et al reference teaches a shifter for shifting the parallel framed data by an odd number of bits (column 2, lines 38-45). The Wright et al. reference teaches a selector for selecting the parallel framed data or the parallel framed data shifted by the odd number of bits, wherein the selected data is provided to the rotator (column 2, line 38). Thus it would have been obvious to have combine the references Taborek, Sr. et al. and Wright et al. to have incorporated a shifter for shifting the parallel framed data by an odd number of bits. The motivation for a shifter for shifting

the parallel framed data by an odd number of bits is so cell delineation can be achieved.
(column 3, lines 50-51 – Wright et al. reference).

With respect to claim 14, the Wright et al. reference teaches wherein the odd number of bits is one (column 2, lines 46-56).

With respect to claim 15, the Taborek, Sr. et al. reference teaches wherein the serialized framed data comprises a plurality of frames, each frame comprising a data field and a synchronization pattern (column 8, lines 46-55).

With respect to claim 16, the Taborek, Sr. et al. reference teaches wherein the data field comprises 64b/66b (column 9, lines 10-27). The Taborek, Sr. et al. and Wright et al. references also addresses various aspects of ethernet technology that address field, synchronization, transmission and other aspects that make data field segmentation obvious to one skilled in the art.

With respect to claim 17, the Taborek, Sr. et al. reference teaches wherein the serialized data is a 10 Gb Ethernet data (column 2, line 55 – column 3, line 16).

Claims 11-12 are rejected under Taborek, Sr. et al. (U.S. 7,020,729), Wright et al. (U.S. Patent No. 7,103,049) further in view of Swoboda et al. (U.S. Patent No. 6,085,336).

With respect to claim 11, the Taborek, Sr. et al. and Wright et al. references teach all of the limitations of claim 10. The Taborek, Sr. et al. and Wright et al. references do not teach an exhaust register, the exhaust register storing one or more positions guessed by the guesser determined not to contain a frame boundary. The Swoboda et al. reference teaches exhaust register storing one or more positions guessed by the guesser determined not to contain a frame boundary (column 38, lines 32-41). Thus it would have been obvious to have combined the references Taborek, Sr. et al. , Wright et al. and Swoboda et al. references to incorporate an exhaust register storing one or more positions guessed by the guesser determined not to contain a frame boundary. The motivation for an exhaust register storing one or more positions guessed by the guesser determined not to contain a frame boundary is to provide improved emulation, simulation and testability architectures and methods that are viable alternative to high capital-cost test equipment and systems (column 3, lines 25-27 – Swoboda et al. reference).

With respect to claim 12, the Swoboda et al. reference teaches wherein the guesser excludes the one or more positions stored in the exhaust register as possible positions of the frame boundary (column 38, lines 58-65).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Enam Ahmed whose telephone number is 571-270-01729. The examiner can normally be reached on Mon-Fri from 8:30 A.M. to 5:30 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques, can be reached on 571-272-6962.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EA

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6/26/07



GUY LAMARRE
PRIMARY EXAMINER